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The Public Use of History in the Digital Society

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Abstract

The paper focuses on Digital History as part of the new cross-sector area of Digital Humanities. It highlights innovation in the field, and its impact both on research and on society. It also addresses the matter of historians' responses to the demands of digital society to create cultural conditions for a public use of historical knowledge.

The paper leads with the changes in the field with respect to interdisciplinary cooperation, dissemination, and to a new approach to "making history". It discusses the digital approach as a method, from various standpoints, breaking with the traditional scholarly discourse: by linking digital historians across traditionally more discrete disciplines of history; by producing a more open attitude to interdisciplinary research; by inspiring in historians a more engaged awareness concerning the objective of increasing historical culture in a broader audience.

The paper also discusses how digital outcomes can innovate the notion of combined research. The re-use of digital products through a new kind of open access to paradata can allow researchers to implement data, pursue research, and foster knowledge.

This contribution also reflects on the relationships between historical research and Cultural Heritage fruition, underlining the perspective of digital outcome dissemination through museums as non-formal education providers.

Lastly, the paper expresses the hope that a new, faster dissemination of research employing the digital approach will develop, as will a debate in the wider context of digital cultures, and also that networking the community will be enhanced.

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Introduction

In recent times, digital approaches have been applied in many different branches of the humanities and have led to the creation of a major new cross-sector area which brings together disparate expertise and necessitates interdisciplinary cooperation. The digital approach is a common denominator in specialised research and teaching as well as in archival practices, dissemination and publishing. Above all, though, it links people with a specific *forma mentis*.

Looking at this cross sector from an academic point of view one can see that it stimulates a new kind of cooperation among traditional disciplines. Today's researchers, indeed, much more than just making use of digital tools, are seeking a new digital perspective: what in this approach is the common element capable of creating shared knowledge?

This is ongoing change requiring an open-minded point of view which can really foster profound innovation, both in culture and in society, and researchers and academics have a crucial role to play to achieve this.

Digital History, as part of Digital Humanities, also includes new approaches in research and in dissemination. Our task is to discuss and to publish how historians are using digital potential in "making history".

This approach could also prove very effective in fostering both a culture of history and one of participation in society. The result expected, however, goes beyond simple access to historical information, with the creation of a cultural condition for public access to historical knowledge. It should ultimately shape new interactions in the construction of the collective memory, and, as such, it can be a fillip to social and cultural development at large.

History + Digital

Digitisation has been but the first change wrought in the historical field through digital technology and, in the space of a few years, online resources, open access collections and publications have increased in number enormously with the result that historians have suddenly gained access to masses of new data – records, images, information – preserved in archives and collections worldwide.

This change, however, is more than a mere increase in volumes of data available, and today electronic resources are actually fostering fresh studies born of a digital approach to research (i.e. increased visual reconstruction, increased spatialisation, increased comparative perspective). History + Digital offers history a new vision and, above all, a new impact.

Digital History self-evidently includes many different focuses on history related to the expertise supporting specific methodologies and sources. The literature related to these branches has begun to characterise these features by adding the word "digital" to each discipline, for example Art+Digital+History (Fisher-Swartz 2014). The same attribute can be applied for Architectural historians, Archaeologists, Egyptologists, Geographers, Medievalists, Social historians, Political historians, Urban historians, Economical historians, and so on, **making their Histories digital**.

Notwithstanding this, it is the method which is of importance to us rather than nomenclature. In fact, Digital History within disciplines is providing some reflections on how to handle such strong change.

Social historians have created the expression "spatial turn" to define the success of the new tendency of historians to link their research to the space that is the widespread use made in the field in recent years of Geographic Information Systems (Bodenhamer 2013). Art historians have also been assessing effects and new directions (Joyeux-Prunel, Dossin and Matei 2013). Historians with a background in architecture, too, have been pondering whether and how to apply their specific skills to the visualisation of architecture and of physical space in general. As a result of their particular academic background they are used to visualising their thinking and projects in space, and thus they may try to apply the same approach to telling the history of architecture and the city (Picon 2014).

In the 19th Century, and coinciding with the beginnings of an historical approach to the past, the invention of photography strongly influenced historical studies and archaeological discoveries. Returning from a mission in Greece the Frenchman Baron Gros marvelled at how, from his own home and simply by examining a daguerreotype image taken on site, he had been able to discover a detail overlooked at the time of his visit to the Acropolis.

The art critic Francis Wey evoked this “discovery” by Gros in the journal *La Lumière* in 1851 (Wey 1851), to highlight the potential of images in enhancing observation intended to find new bases for interpretation. Nowadays, the resource which is improving surveying, analysing and understanding is digital. Just as at that time photography was not just an instrument reproducing reality, digital is not just a tool representing knowledge.

In some ways, historians like other scholars are already familiar with the digital world, however, while search engines and some basic software are used on a daily basis, a digital approach is not yet a common language for them with regard to innovating tools and methods in the discipline.

GIS, 3D models, datasets are such tools, but it is how they can be moulded into useful instruments for improved collecting and managing of data, surveying, and for developing interpretations by **asking new questions** that is of interest to us.

Furthermore, important pioneering contributions have approached Digital Humanities from a scientific and systematic point of view (Schnapp 2008; Burdick 2012). Some books also have already stressed the fact that “technology is changing the field of history but in more complex and interesting ways than simply the conversion of sources and documents into digital form” (Weller 2013). Weller’s book, *History in the digital age*, and some others, such as *Digital Urban History: Telling the history of the city in the age of the ICT revolution* edited by the author of this article, have initiated a discussion on the effects of ongoing change in the field. The texts collected within the two books have illustrated various approaches and case studies from several specialised fields within the broad framework of History.

However, this change is too fast to be pinned down accurately in a book. In the space of a couple of years many more historical digital outcomes have experienced new models, in parallel with an enormous new quantity of digitised data available. On the one hand these results are tied up with the development of the knowledge in each specific field, and on the other hand the lessons learned by using digital tools in a single field are important for a comparative perspective with other Humanities disciplines. Thus, this new approach links digital historians across disciplines of history which have previously tended to be quite separate.

Open Access Research

In the presence of change which has the effect of a bomb on the academic world, the impact of Digital History, and parallel fields, has, as yet, been largely underestimated by academics. Results and methodologies are quite different when compared with the state of the art of disciplines.

Outcomes are the results of **combined research** resulting from the cooperation between researchers. Research projects deal with large surveys managing considerable quantities of mainly heterogeneous data (e.g. archival records, iconographies, maps, drawings, statistics, information), and often combine various digital systems for the purpose of collecting data or of representing knowledge (e.g. datasets, GIS, 3D models, video). Therefore, unlike the traditional approach to history, generally based on individual research, digital research presupposes **teamwork** as a basic methodology.

The team generally consists of experts from different backgrounds and in consideration of the need to shape digital systems and software – and not merely to use them –, what emerges is a basic combination of Humanities and Technologies. Lastly, it includes relationships related to Cultural Heritage, because of the ‘**usability**’ of its survey and its fruition. For all these reasons research and outcomes are strongly **interdisciplinary**.

The cross-sectorial approach is beginning to find a place for itself at dedicated conferences - with, for example, *Digital Heritage Conference* being among the most popular and well-attended in Europe – in terms of “Analysis and Interpretation”, albeit under a conference topic on “Computer and Information Technology”. Thus, specialised thematic sessions for “digital

fans” are also held in each historical specialist symposium. It is recognized in some quarters as an academic field, what is certain is that it is, at the very least, comparable with a **community**.

The Digital History community is estimated to be larger than the literature acknowledges as it is quite difficult to disseminate its outcomes. The static and two-dimensional nature of traditional prints is ineffective in illustrating the dynamic process and interactive systems of digital results. As such, digital outcomes also demand **innovation in academic publishing** in such a way as to effectively provide documentary evidence of digital research.

What ensues breaks with the traditional scholarly discourse from various standpoints: it introduces new relationships between written texts and images by transcending “the linear structure of verbal description” (Davis 2011); in a way, it disrupts the “quiet complicity” between history and the written word with a wide range of effects on publications (Tredinnick 2013).

Disseminating research and **networking the community** might prove a stimulus to a more thoroughgoing innovation of research procedures. Open access to publications and digitised sources is an important step towards a new democratic approach to knowledge.

Ultimately, the question is: will it be possible to create really innovative open access for research outcomes?

Scholars are generally very protective of their collected data. Could the digital approach contribute to a sea change in mentality by increasing cooperation among researchers?

Outcomes conceived by digital history, such as datasets, virtual reconstructions or mapping issues, are obviously the results of data interpretation. **Open access** to digital outcomes should mean something more than just “digital reading”. The new systems allow the outcome to include collected sources and to provide evidence of the link between data and their processing. In conclusion, systems can show the research as a whole, data and shaped information, by linking interpretation to records.

This is a very important opportunity, particularly in a dynamic field ungoverned by common agreements about procedures and criteria for sharing. Visualised information implies a “manipulation” and researchers should open up the process of computer-based visualisation (Bentkowska-Kafel 2013).

Open access also presupposes availability of **keys** to systems (paradata) so that other researchers, with their own input, can enter the process in order to check/use/pursue/transform the previous results and ultimately **re-use the research**. Such open access to research would increase participation by fostering the notion of a **shared research community**.

A digital research project mentality is to be established and fostered through new data acquisition. For this reason, it requires strong “digital collaboration” among researchers, and the institutions where data are preserved, such as archives, libraries, museums (Levy, Turner 2010).

This approach also stimulates **sustainability**. Scholars have highlighted how difficult any form of re-use of digital heritage contents is nowadays, despite the best efforts of galleries, libraries and museums to release their digitised contents online through open licensing (Terras 2015). In this context, copyrights, too, represent a very significant challenge.

Participation

In the early decades of the 20th Century Walter Benjamin studied the effects of mechanical reproduction on Art. Benjamin analysed the changes in the status of the work of art called into question by procedures of mass production. He noted that quantity produced several effects, even in understanding the quality of the work of art by improving its communicative nature. Benjamin, first and foremost, took as his starting point a reflection on the increasing masses of participants determining a new and different participation.

Digital society asks now for a new kind of participation. Does this request also extend to History?

The effects of the use of Information and Communication Technologies in the telling of history lie surely in their capacity to make content easy to grasp. Data visualisation in space and time creates an immediate orientation for the interlocutor who becomes active in querying and deep information.

In a certain way, this approach seems a sort of awakening within the discipline, and has created a sort of passion for “bringing history to life and reaching a wider audience using

cutting-edge technology” (Mizzy 2003). And even if some phrases such as “calls to action” are considered “redundant”, the digital “is irrevocably part of the field” (Fisher and Swartz 2014).

Nonetheless, survey show that many historians remain sceptical, to say the least, about the use of digital tools in their field (Zorich 2013). There may be various reasons underlying this attitude, including the generation gap in the use of new technologies. Other reservations concern historians' fear that a confusion between **history and memory** might arise generating a sort of “convenient” research for the confirmation of theses.

These implications are related to the applied research for Cultural Heritage and its dissemination to a generalist public. Translating history through digital tools for ‘a mass consumer’ could impoverish the complexity of the research and simplify the richness of its interpretations. In this light, Digital Heritage could risk becoming merely entertainment.

Academics need to continue to discuss some illusory freedoms created by digital technologies and the web. Some scholars have already raised the alert that “we should be aware that this “freedom” has also a downside to it. It jeopardizes the role of the academics and heritage workers as informed brokers or gatekeepers to the information” (Stabel 2014). Creativity and freedom of research are essential to the advancement of knowledge.

Regardless of the above, the relations between History and Cultural Heritage are undeniable and the effects of digital approach, in this area, are very important for social involvement. Researchers should play a role reflecting the increasing public interest for Cultural Heritage. They should aim to meet the general public's demand for historical content.

Europe has **highlighted** the democratic effects of the digital society, and to this end it fosters new national policies in public institutions. Indeed, in some cases, governments really have adopted technology “focusing on innovation rather than organizational change or skill development” (Navarrete 2014). The European Research Council fosters research projects to devise ways to increase citizens' awareness by making complex content easy to understand.

The use of history and the effects that this knowledge can produce on the users is the most salient feature of the ongoing change. Some have observed that virtual heritage projects “focused either on 'process' or 'product' but rarely consider 'users' (end-users' perception of the content)” (Rahaman and Beng-Kiang 2011). Interactional settings need to be enhanced in order to engage societal actors and integrate the concept of history.

In this way, Digital History can be a real revolution in the uses of history. If digital tools improve access to knowledge, how can digital history really improve historical knowledge in society? What is the public use of history that this perspective affords?

What's New in Digital History?

From an academic perspective, Digital History has also given rise to new teaching and learning. Digital History may also be understood as a way to provide students access to historical documents and texts. This is true of projects developed at the turn of the century by some universities (such as that of the Department of History and the College of Education at the University of Houston, in collaboration with other organisations, including the Chicago Historical Society and the Gilder-Lehrman Institute of American History). In the meantime, some models from pioneering laboratories such as the Stanford Humanities Lab developed by Jeffrey Schnapp now leading the Harvard **MetaLab** have given rise to research centres bringing digital into **research on humanities**.

Academic literature has begun to discuss the change in teaching, while some reflections and some experimental courses also include the creation of a new collaborative model (Bruzelius 2013). Still, notwithstanding its pervasiveness in everyday life, the digital approach has not been fully developed in teaching/learning, particularly as concerns compulsory education.

The consequences are very important, also when considering the changed cognitive methods of digital natives. New ‘digital historical products’ could produce strong effects, with a range of repercussions including that on the meaning of history in society. An innovative use of the digital approach in the historical field, in fact, could make documentary research, records and information highly accessible, which would make an enormous impact on society. Only in this way can it create genuine **meaningful public access** to historical information.

I would like to relate a personal experience which explains this impact. Some years ago, my thirteen-year-old son was studying for his final exam at school. His teachers asked him to try to condense his learning in the various subjects in the three years of junior high school. It was not easy to combine the different parts of the syllabus, such as literature, history, geography, maths, not to mention technology, so removed from the rest. He was greatly stressed and unhappy because he was unable to find points of contact among the different fields.

So, I looked into the matter with the intention of supporting his efforts. We started with 'history', obviously because he found it so very boring. He had to read the script of *Allons les enfants* and the story of the Jewish children was not boring at all, it was horrific. Are the young generation unaffected by the Holocaust? Are the new generation uninterested in history today?

I keyed in on his computer the URL http://tetrad.huma-num.fr/Tetrademap_Enfant_Paris/ and I showed him this important project conducted by Jean-Luc Pinol at the French CNRS about the Holocaust in France.

The basis for this project was an enormous quantity of data collected and published over several years by an eminent French Jewish researcher. Data referred to the deportation of 11,400 French children from France. The project was prompted by the *Mission d'étude sur la spoliation des Juifs de France* published in 1979. The book represented a life's worth of research by Serge Klarsfeld, who was able to identify people, names, places, dates defining deportation routes and territories in the pursuit and prosecution of Nazi criminals. This book runs to more than 800 pages.

The digital project arranged and made all these data and research accessible online. A GIS identifies places linked to a database with information about the children: the date when each one was taken from their homes, the number of children in each family and their ages. This GIS is chilling in its terseness.

My son was no longer bored. He could not stop reading and checking. He found streets in Paris thick with markers, and others with none. At long last, he was able to find a link between history and geography, to find relationships with literature and statistics, and lastly he could link history and digital technology. Fundamentally, he could 'measure', by visualising it in a real space, and understand something about the Holocaust.

The project represented the enormous body of knowledge behind this research through the visualisation of data. And it did something more fundamental in the process: it made this aspect of history really public and accessible.

This personal story exemplifies one basic notion: digital history can change **public use** of history with strong effects on users.

Exhibiting History

In the early 19th Century an historical reconstruction was exhibited by an unusual museum based on the display of remains of buildings demolished in the wake of the French Revolution.

The *Musée des Monuments Français* remained open for a few years only. It was perhaps the first public museum intended to exhibit history. The aim of its creator, Alexandre Lenoir, was to use the collection of remains and artworks to tell a story connecting visitors to French history.

This unusual *tutorial* was quite important in teaching people about the origins of the nation in a period of significant changes.

The result was an itinerary which proved very effective in its appeal to public, even if the museum's interpretation was not completely scientific. The public liked the exhibition because they felt as if they were in an **immersive space** directly linking them to the past. The exhibition made the same history accessible that historians (i.e. Michelin) were turning into books. Young people were also impressed by the museum. The architect Viollet-le-Duc, for example, remembered years later how the visit encouraged him to further his studies on medieval architecture.

More history museums followed in France and around Europe, such as museums of the city, and archaeological collections. At the same time, art museums introduced an historical approach into the way in which they displayed collections, too; education has, after all, always been an important aim for museums.

Digital displays, full immersion rooms, virtual reproduction are a sort a development of these same goals. **Museums turn to digital** tools in order to appeal to the public and to attract digital

natives. In the meanwhile, Virtual Reality and the web introduce new kind of exhibitions. Virtual Museums are largely a challenge for Tangible Heritage and, for this reason, they also represent a challenge in the moulding of an architectural approach to Digital Heritage.

Digital tools (e.g. photogrammetry-scaled rectified photography, laser scanners), in fact, capture and acquire a wide range of physical objects. The results can be used in a wide range of applications. Nonetheless, the use in the field of historical analysis and heritage conservation still needs to be addressed as “a significant gap exists between the information needed by professionals working in the field of conservation and manufacturers claims of these new technologies” (Quintero, Blake and Eppich 2007).

Museums and Virtual Museums can play a strategic role as **non-formal education providers**. Media experts generally create displays for museums “translating” the state of the art in the literature on the subject. Some of these displays are very interesting and attractive but are generally conceived to capture the attention as a form of edutainment and they remain rather traditional in terms of their content. Does a collaborative endeavour involving researchers in academies and in museums, media experts and museums operators produce a museum which is more dynamic in experimenting with content and link the furtherance of knowledge and research to the general public?

Museums, both traditional and virtual, are the most effective meeting points for expertises connected by a common digital language and, as such, they will have to try to contribute strongly to making research outcomes accessible to a wide audience. Through museums Digital History (Art History, Urban History, Archaeology, Egyptology, and so on) and Digital Heritage outcomes **encounter users**. Such an innovative cross-sectoral approach can complement the concept of schooling of today.

Search engines such as Google have allowed easy access to historical information for the public at large but access to information alone is not sufficient to create genuine equity. This access, without appropriate cultural instruments, is illusory. Digital History displays data interpretation which is creating a framework in which historical events and Cultural Heritage take on meaning. In this context digital tools help users to bridge the knowledge gap by ‘making visible’ meanings and developments.

Ease of use can conceal the complex research behind it as well as the complex structure necessary to communicate the data. In this regard, the goal of academic research and museums displays is to produce rich narratives without compromising scientific accuracy.

Several years ago the Jewish German art historian Richard Krautheimer wrote about the change in his studies on Roman architecture when, in the Thirties, he had to emigrate to the USA. In this short biographical note he recollected how the art historian Panofsky had been wont to say: “the one with the most photographs wins”. The luminary highlighted the importance of visual information in research. In the same note, though, Krautheimer also mentioned that he had been wrong in some aspects of his studies on Armenia because he had not travelled there to visit its monuments.

Museums are very active in producing virtual heritage and in fostering their web sites, to the extent that some fear that virtual museums might take the place of real visits to museums and Cultural Heritage. Nevertheless, the uses of VR are ever more integrated with other tools such as Augmented Reality for the fruition of Cultural Heritage, and such integrated platforms and Apps are mostly conceived as supports to visits and as pre-information for visitors.

In the final analysis, we believe that historical research is undergoing structural change and demands reflection. In parallel, the digital society develops new demands. This journal's mission is to network researchers and to encourage scientific exchange in the field in an essentially transdisciplinary perspective.

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